



Volunteer Lake Assessment Program Individual Lake Reports

NUBANUSIT LAKE, NELSON, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	5,184	Max. Depth (m):	30.2	Flushing Rate (yr ⁻¹)	0.4	Year	Trophic class	KNOWN EXOTIC SPECIES
Surface Area (Ac.):	715	Mean Depth (m):	11.5	P Retention Coef:	0.67	1988	OLIGOTROPIC	
Shore Length (m):	13,700	Volume (m ³):	30,024,500	Elevation (ft):	1376	2003	OLIGOTROPIC	

TROPHIC CLASSIFICATION

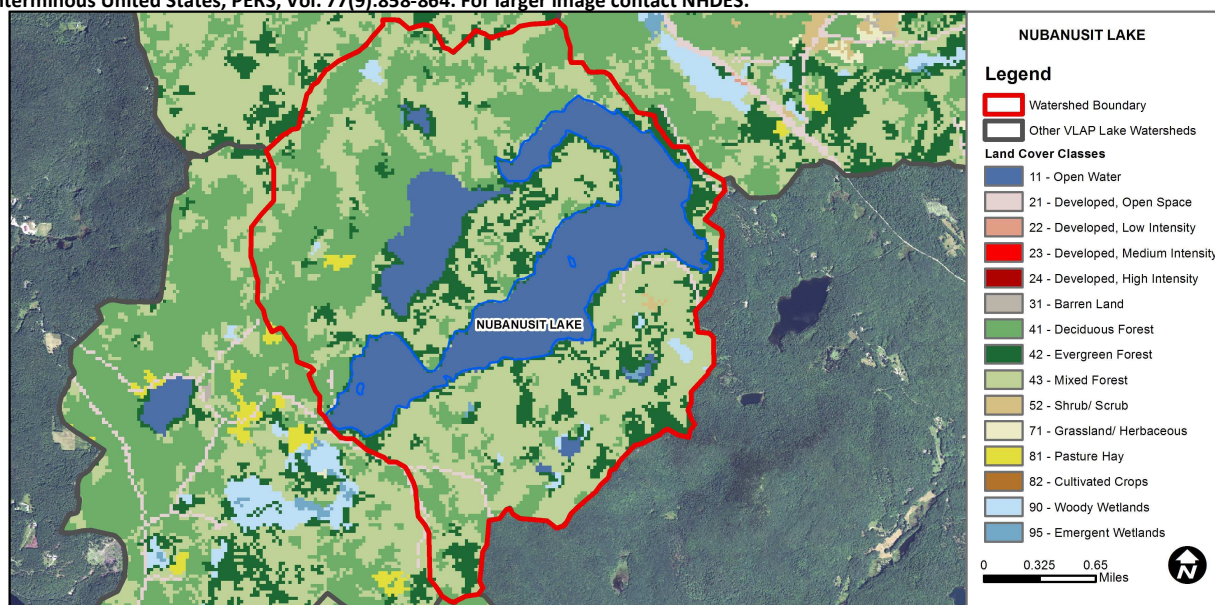
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Good	At least 10 samples with 1 sample but < 10% of samples exceeding criteria.
	D.O. (% sat)	Good	At least 10 samples with 1 sample but < 10% of samples exceeding criteria.
	Chlorophyll-a	Very Good	>5 samples and median is < 1/2 threshold.
Primary Contact Recreation	E. coli	Encouraging	>2 samples exist that are > 75% of geometric mean criteria, but not enough samples to calculate geometric mean. No single sample exceedances. More data needed.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	23.4	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	0.66	Deciduous Forest	22.98	Pasture Hay	0.22
Developed-Low Intensity	0	Evergreen Forest	12.97	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	38.92	Woody Wetlands	0.68
Developed-High Intensity	0	Shrub-Scrub	0.1	Emergent Wetlands	0.13



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

NUBANUSIT LAKE, HANCOCK, NH

2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- 🔥 **CHLOROPHYLL-A:** Chlorophyll levels were very low and remained stable throughout the summer. Historical trend analysis indicates a significantly decreasing (improving) chlorophyll level since monitoring began. We hope this continues!
- 🔥 **CONDUCTIVITY/CHLORIDE:** Conductivity and chloride were very low and well below NH lake median values.
- 🔥 **E. COLI:** E. coli levels were well below state standards for public beaches and surface waters.
- 🔥 **TOTAL PHOSPHORUS:** Deep spot phosphorus levels were very low and well below the NH lake median. Historical trend analysis indicates a relatively stable epilimnetic (upper water layer) phosphorus level since monitoring began.
- 🔥 **TRANSPARENCY:** Transparency has been measured with the viewscope since 1997, prior to that transparency was measured without the viewscope. Transparency remained stable throughout the summer and was well above the NH lake median. Historical trend analysis indicates the transparency has remained relatively stable since monitoring began.
- 🔥 **TURBIDITY:** Turbidity levels were very low at all stations.
- 🔥 **pH:** pH levels were less than desirable and potentially critical to aquatic life.
- 🔥 **RECOMMENDED ACTIONS:** Lake water quality looks great. Keep up the great work!

Station Name	Table 1. 2012 Average Water Quality Data for NUBANUSIT LAKE								
	Alk.	Chlor-a	Chloride	Cond.	E. Coli	Total P	Trans.	Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	#/100ml	ug/l	m	ntu	
							VS		
Daloz Cove				14.7				0.21	6.33
Deep Epilimnion	1.15	0.74		14.8		3	12.3	0.28	6.46
Deep Metalimnion				14.8		3		0.35	6.14
Deep Hypolimnion				16.1		6		0.38	5.75
Hancock Landing			3	14.2	10	3		0.21	6.37
Lot 10 Inlet				14.7				0.29	6.35
Outlet In Stream			3	14.7				0.30	6.36
Shadrack Pd Brook				14.6				0.22	6.35
Spoonwood Dam				14.6				0.40	6.24

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

Alkalinity: 4.9 mg/L

Chlorophyll-a: 4.58 mg/m³

Conductivity: 40.0 uS/cm

Chloride: 4 mg/L

Total Phosphorus: 12 ug/L

Transparency: 3.2 m

pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

Chloride: < 230 mg/L (chronic)

E. coli: > 88 cts/100 mL – public beach

E. coli: > 406 cts/100 mL – surface waters

Turbidity: > 10 NTU above natural level

pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Improving	Data significantly decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.

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